Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762	)	WT Docket No. 06-150
	)	
and 777–792 MHz. Bands	)	
Implementing a Nationwide,	)	PS Docket No. 06-229
Broadband, Interoperable Public	)	
Safety Network in the 700 MHz. Band	)	

COMMENTS OF THE NEW YORK CITY POLICE DEPARTMENT

I. INTRODUCTION

1. The New York City Police Department respectfully submits these comments in response to the Commission's Second Further Notice of Proposed Rulemaking regarding the proposed implementation of a Nationwide Broadband Interoperable Public Safety Network in the 700 MHz. band. The New York City Police Department appreciates the Commission affording us this opportunity to express our views regarding this critical and timely issue.

2. The New York City Police Department is the Nation's largest police agency with plenary law enforcement responsibility within the five Boroughs of the City of New York. The New York City Police Department receives approximately eleven

million E-911 calls annually, and patrols an area of approximately 306 square miles, including some of the most densely populated geography in the Nation.

II. BACKGROUND

3. In September 2006, New York City entered into an agreement with Northrop Grumman Corporation to construct a broadband public safety data network on 2.5GHz. leased spectrum. This network is nearing completion and is projected to be fully operational by the end of this year.

4. In April 2007, the Commission issued a Report and Order and Further Notice Of Proposed Rulemaking re-designating the 700 MHz. public safety wide band spectrum to broadband spectrum and linking this spectrum to the winner of the D Block auction, with the provision that the D block auction winner enter into a Public Private partnership and construct a nationwide shared commercial / public safety broadband network to public safety reliability and availability standards.

5. In January of this year, the Commission conducted an auction of 700 MHz. spectrum. Although the overall financial goal of the auction was met, bidding for the D Block fell far short of meeting the minimum reserve price. The failure of the D Block auction illustrates the problems inherent in the nationwide Public Private Partnership concept. Although public safety and commercial networks may share

technology, they do not share the same mission. Conflicts of interest arise that cannot be ignored. Public safety agencies require a robust network that will remain operational during virtually any circumstance; however commercial network operators

are motivated by commercial priorities to build networks that meet commercial requirements. The NYPD's opinion, reinforced by conversations with commercial wireless carriers, is that there is simply no business case for a commercial wireless network operator to build a nationwide network that will meet public safety coverage and survivability standards. Potential bidders are reluctant to bid due to the enormous costs to construct the network coupled with the uncertainty of the public safety requirements that they would be required to meet. These requirements are currently undefined; they would be established through negotiations after the D Block spectrum is awarded to the successful bidder.

III. NEW YORK CITY WIRELESS NETWORK (NYCWIN) STATUS

6. In New York City, a municipal public safety broadband data network (NYCWIN) is already operational in Manhattan and Brooklyn, as well as parts of the Bronx and Queens. The NYCWIN network will be fully deployed by the end of 2008. There is little incentive for New York City public safety agencies to pay subscriber fees to access a nationwide public/private broadband network when a municipal broadband data network is available. Consequently, in New York City

the 700 MHz. broadband public safety spectrum would likely revert to secondary (commercial) use absent any primary (public safety) users. New York City will not benefit from the 700 MHz. public safety broadband spectrum. Therefore, New York City would have effectively donated its 700 MHz. broadband spectrum, and will be penalized for proactively addressing the public safety agency broadband access issue within its jurisdiction, rather than waiting for a nationwide broadband network that will take years to deploy.

IV. 700 MHZ CHARACTERISTICS

7. We recognize that there is a trade off between coverage and data throughput. Higher frequencies cover smaller areas than lower frequencies however they provide for higher throughput since channels may be reused at closer intervals and coverage patterns can be more accurately controlled. The 700 MHz. spectrum strikes a balance between coverage and throughput while providing an ideal platform to deploy a public safety broadband network. In the 700 MHz. band, the outdoor propagation coverage footprint is sufficiently large that the number of sites required to insure adequate coverage will be reasonable. However the coverage area is small enough that the propagation can be managed. Indoor coverage at 700MHz. will be greater than existing commercial wireless networks; this is particularly beneficial for public safety network deployments in dense urban areas.

V. REGIONAL OR LOCAL APPROACH

8. We believe that the needs of Public Safety can best be served by changing the rules for the 700 MHz Public Safety spectrum to allow regional or local public safety entities to be licensed on the 700 MHz. broadband spectrum. Under this model, broadband networks constructed within their region would interoperate by conforming to regional public safety standards. These standards would include a common air interface. Local governments or public safety agencies within the region would have the option of deploying a mission critical broadband public safety network within their jurisdiction, or entering into a public private partnership agreement with a commercial network provider to deploy a shared commercial / public safety network to regionally approved public safety standards developed to meet the needs of local public safety entities. The Commission should be mindful that the needs of one region are very different from another. Since geography, population density and building construction all vary between Regions, public safety broadband network standards developed regionally, based on local requirements are far more appropriate than adapting universal or nationwide standards.

9. As an example, indoor coverage is a major concern in dense urban areas. The building construction of skyscrapers in New York City differs greatly from building construction techniques employed in residential or rural areas. The signal strength required to achieve indoor coverage in dense urban areas is significantly higher than the signal strength required to achieve indoor coverage in suburban, rural or remote areas. It would be unnecessary to build a public safety broadband network in rural America to deliver the signal levels required to achieve indoor coverage in New York City. Conversely a public safety broadband network built to standards that are entirely appropriate for rural areas will not provide adequate indoor coverage in downtown sections of major cities.

10. Public Safety agencies respond to millions of incidents each year; virtually all of these incidents are local or regional in nature. The public/private broadband network that the Commission has proposed would take years to construct and implement. Both the Nation's Capital and the Nation's largest city have elected construct their own broadband public safety data networks rather than to wait for the deployment of a Nationwide network that may never materialize.

11 Under the Commission's public/private broadband proposal, the D Block auction winner is not required to construct the Public Safety broadband network in areas where they do not deploy their commercial network. It is extremely unlikely that they would deploy their network in unprofitable rural or remote areas. If the

public/private network is not deployed in rural and remote areas, and if the Nation's Capital and the Nation's largest city do not participate, this cannot be considered a nationwide network. In areas where commercial broadband networks are already deployed, there is no assurance that using the proposed public/ private broadband network will be less costly for public safety agencies. If this proves to be true, cash strapped public safety agencies may elect to use an existing commercial broadband network rather than the public/private partnership network, thwarting the Commission's intent.

VI. PROPOSAL

12. We propose that since the overall financial goal of the action was met, the Commission not re-bid the "D" Block spectrum, rather that they assign this spectrum to public safety. Combining the 10MHz. of D Block spectrum with the 10MHz. of public safety broadband spectrum would create a contiguous block of spectrum large enough to accommodate public safety voice and data requirements. As an alternative proposal, if it is not possible to assign the D Block directly to public safety, we propose that public safety agencies be granted immediate access to the 700 MHz. broadband public safety spectrum pending the outcome of a regionalized second auction. In any event, public safety should retain control of the 700MHz. broadband public safety spectrum even if a regional or local public/private partnership is ultimately established.

13. We now believe that the Commission never intended to prohibit the use of the 700 MHz. broadband public safety spectrum for mission critical voice communications. With this new understanding of the Commission's intent, we believe that the 700 MHz. broadband spectrum can serve as a mechanism for public safety agencies to migrate their mission critical voice communications to a next generation radio network, which we believe will be an integrated broadband voice and data network utilizing a CDMA or OFDM air interface and an IP backhaul network. We believe that the technology employed in future Public Safety radio systems will closely mirror the technology being deployed in commercial wireless networks. We believe that the next generation commercial broadband network will provide voice capabilities more acceptable to public safety users.

14. Given alternative spectrum "green space", many public safety agencies or local governments faced with the daunting task of replacing legacy land mobile radio systems to meet the narrow banding mandate, may reconsider their plans and choose to construct a broadband network in the 700MHz. spectrum that would support both mission critical voice and broadband data. Public Safety agencies taking advantage of this opportunity would free themselves from the high cost of replacing one obsolete technology with a technology that, although somewhat more spectrally efficient, is virtually outdated. These agencies would benefit from technology advancements developed for the commercial wireless industry and enter

into a much more competitive arena where volume drives down subscriber unit costs. Funding slated for narrowband compliance could be redirected towards building a 700 MHz. broadband voice and data network that is far more spectrally efficient than traditional narrowband voice land mobile radio public safety networks, potentially freeing up current spectrum.

15. Public Safety agencies already committed to a narrowband voice solution to meet the narrowband deadline may choose to utilize the 700 MHz broadband public safety spectrum solely for data in the near term, then migrate voice to the 700MHz. public safety broadband platform from their narrowband voice solution when broadband voice network Push To Talk latency issues, which have been a major concern of public safety agencies, will likely be resolved. Suppliers of public safety radio networks including Motorola, MA Com, and Rivada Networks have already expressed their intent to pursue voice broadband technology for public safety communications; other network providers are likely to follow in kind. Equipment manufacturers will almost certainly be eager to supply voice broadband equipment to meet the network provider's requirements. This business dynamic will increase competition and ultimately reduce costs.

16. The Commission should reconsider the deadline to meet the narrowband requirement on the land mobile radio bands below 512 MHz. for public safety agencies willing to make a commitment to migrate to a 700 MHz. broadband

network. Encouraging public safety agencies to migrate to a 700 MHz. broadband network will foster interoperability while simultaneously bringing public safety agencies into the mainstream of technology development, ultimately lowering costs.

17. Regional interoperability can be achieved by adapting a common air interface and operating on a common frequency band. National interoperability can be achieved by linking the regional networks IP based backhaul networks, creating a "network of networks", which may include a combination of public safety and commercial networks,

18. In rural and remote areas, deployable broadband network assets can be pre-positioned for use during a large scale event. The inclusion of a satellite backhaul component can link these deployable networks to a node on an IP based network which in turn would be part of the "network of networks" thus establishing connectivity with State, Regional and National command structures. These deployable assets can become part of the State Communications Interoperability Plan.

VII. CONCLUSION

19. The Commission has a unique opportunity to address the issue of public safety access to broadband networks by permitting regional and local public safety agencies to construct interoperable broadband voice and data networks The 700 MHz public safety band is the most appropriate frequency band for this application The establishment of regional or local broadband networks on the 700 MHz public safety allocation should be accompanied by regional frequency coordination in order to facilitate frequency reuse at close intervals. A common air interface and a common backhaul protocol (IP) must be chosen to insure interoperability.

20. The Commission should re-examine their position on narrow banding as the most spectrum efficient approach for voice networks. We believe that commercial wireless network providers and the Commission share a common goal of spectral efficiency. We believe that the next generation public safety radio system will be a broadband voice and data network taking advantage of and following the technology lead of commercial wireless manufacturers and network providers.

21. We believe that many public safety agencies would ultimately opt to construct a public safety broadband voice and data network on the 700MHz. band when their existing radio network reaches end of life if the spectrum were made available to them at no cost, taking advantage of technology pioneered by commercial wireless networks.

Respectfully Submitted,

NEW YORK CITY POLICE DEPARTMENT

Charles F. Dowd
Deputy Chief, Commanding Officer
Communications Division
1 Police Plaza
New York, New York 10038
646.610.6765